CHAPTER 3

MAINTENANCE INSTRUCTIONS

SECTION I. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

3.1 GENERAL.

Preventive Maintenance Checks and Services (PMCS) are performed to keep the simulator in operating condition. The checks are to find, correct, prevent, or report problems. The I/O performs the PMCS tasks shown in Table 2-1, the PMCS Table.

a. Pay attention to WARNING and CAUTION statements. A WARNING statement highlights an essential operating or maintenance procedure, practice, etc. which if not strictly observed, could result in injury or death of personnel, or long term health hazards. A CAUTION statement highlights an essential operating or maintenance procedure, practice, etc. which if not strictly observed could result in damage to, or destruction of equipment, or loss of mission effectiveness.

b. Perform BEFORE PMCS each time before the simulator is operated, using the PMCS Table. If installing the simulator, perform PMCS, as applicable, as the simulator is unpacked and installed on the tank.

c. Perform DURING PMCS while operating the simulator. This means monitor the simulator for any unusual conditions while it is operating.

d. Perform AFTER PMCS at the end of a training session if the system is not to be used for several days or at the end of each day's use.

e. If something is found wrong when performing PMCS, fix it, if possible, using Chapter 3, Section II, Troubleshooting and Maintenance Procedures.

3.2 PMCS PROCEDURES.

The PMCS table is organized by columns, providing a sequential inspection process designed to ensure the complete system is checked before and after operation. From the left, these columns are:

a. Item No. column provides the sequence of inspection, and the number corresponds to the diagram at the top of the PMCS table.

b. Interval column prescribes the interval during which the item is checked: before, during, or after operation.

c. Location/Item to Check or Service column names the area, item, or system to be checked.

d. Procedure column prescribes the technique for checking or inspecting the item or system.

e. Not Fully Mission Capable If: column describes faults, keyed to a specific portion of the system, which keep the system from being fully operational.

3.3 PMCS TABLE.

The I/O performs PMCS on equipment in the AFIST training system, illustrated in Figure 3-1 and 3-1a, in accordance with the procedures listed in the PMCS Table.

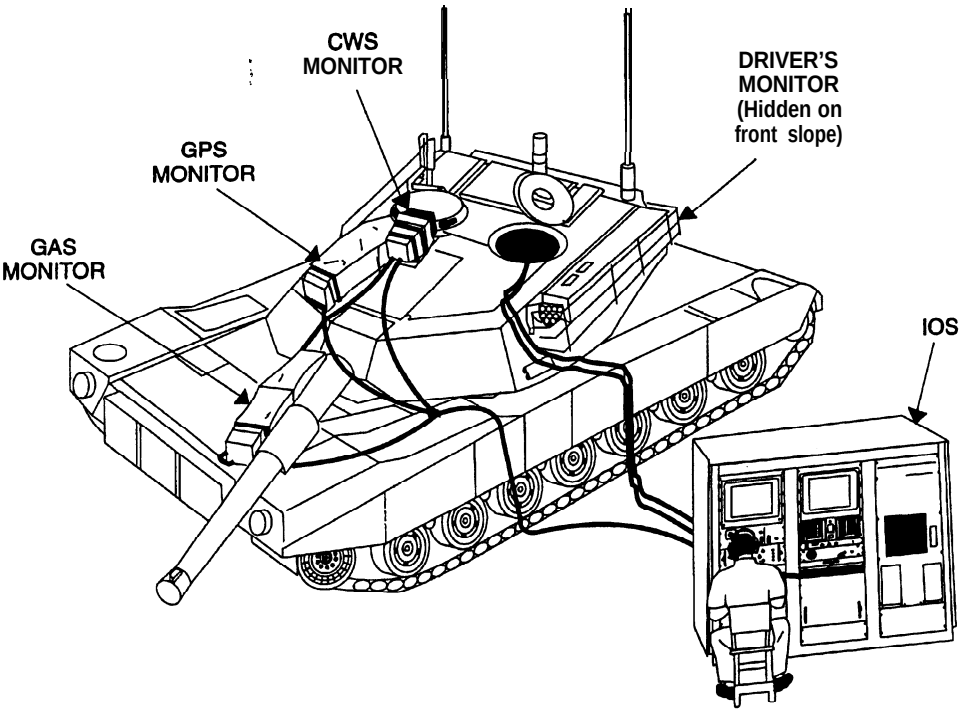

Figure 3-2. Location of Major Components (TD 17/162A)

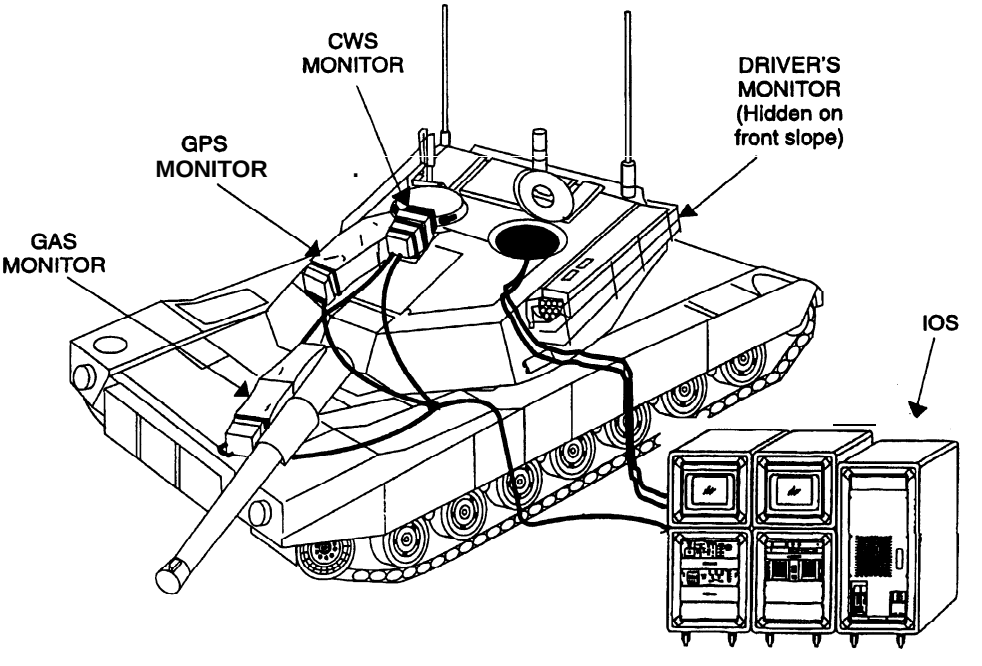

Figure 3-1a Location of Major Components (TD 17/162B)

Table 3-1. Preventive Maintenance Checks and Services (PMCS)

Item No.	Interval	Location/ Item to Check or Service	Procedure	Not Fully Mission Capable If:
1	Before	IOS (Figure 3-2and 3-2a)	Check components and controls for presence, condition, cleanliness.	Any component is missing.
			Check glass on monitors,	Any monitor screen is cracked or broken.
			Check for presence and condition of cables and connectors on IG front.	Any cable insulation is cracked, cut or frayed.
			Inspect connections to ensure that all are complete and properly connected on IG front.	Any connector is broken or will not connect properly.
			Tighten any loose connections.	

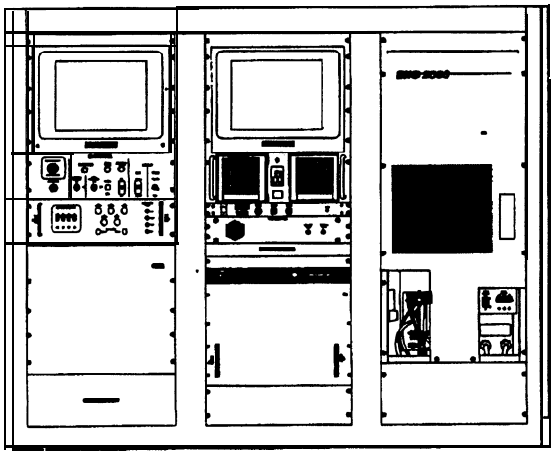

Figure 3-2. IOS (TD 17/162A)

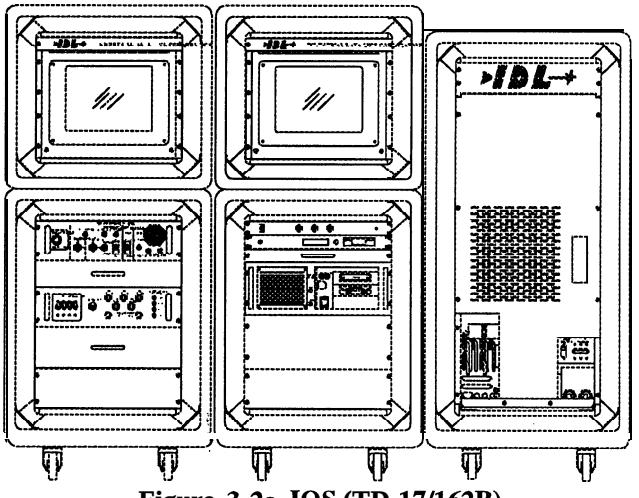

Figure 3-2a. IOS (TD 17/162B)

Table 3-l. Preventive Maintenance Checks and Services (PMCS) (Continued)

Item No.	Interval	Location/ Item to Check or Service	Procedure	Not Fully Mission Capable If:
2	Before	Tank Exterior: Cables (from IOS to Tank) (Figure 3-3 and 3-3a)	Check for general condition, cuts, frays, breaks in insulation, loose connectors. Tighten any loose connectors.	Any cable is frayed, cut or broken; any connector is broken.

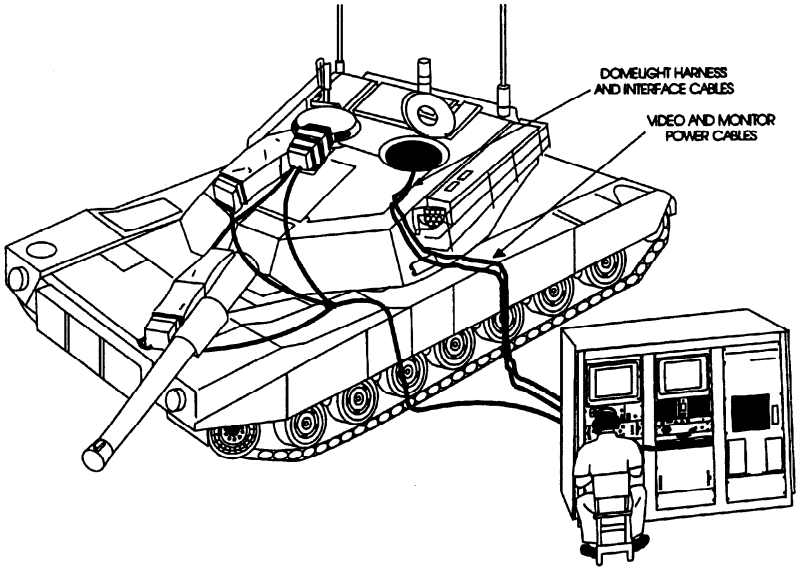

Figure 3-3 Tank Exterior, Cables (TD 17/162A)

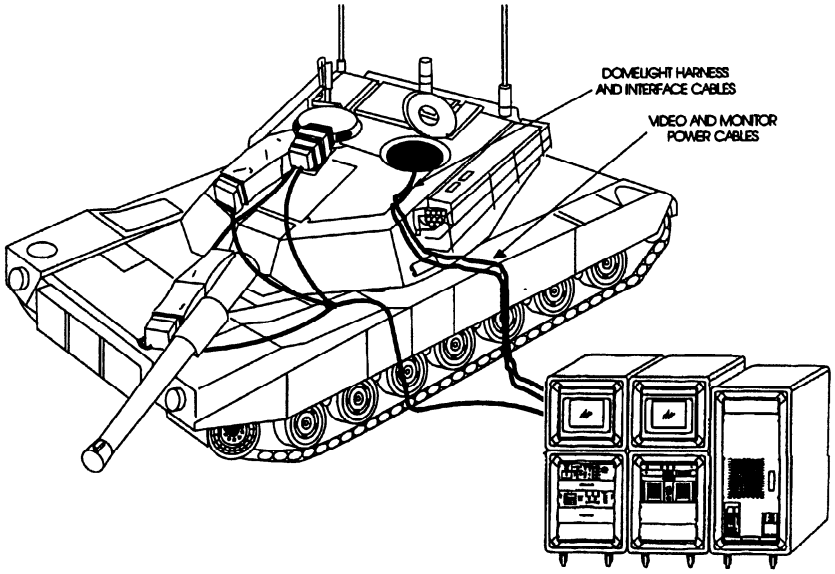

Figure 3-3a. Tank Exterior, Cables (TD 17/162B)

Table 3-l. Preventive Maintenance Checks and Services (PMCS) (Continued)

Item No.	Interval	Location/ Item to Check or Service	Procedure	Not Fully Mission Capable If:
3	Before	Tank Exterior: Monitors (Figure 3-4 and 3-4a)	Check monitors for general condition.	Monitor is cracked or broken.
4	Before	Tank Exterior: Monitor Mounts (Figure 3-4 and 3-4a)	Check monitor mounts for general condition and adjustment. Tighten any loose fittings or adjusting points.	CWS monitor mount mirrors are scratched or broken. Mounts do not adjust properly. Mounts are broken or have missing pieces.
5	Before	Tank Exterior: Collimator Lens Assemblies (Figure 3-4 and 3-4a)	Check lens assemblies for general condition and adjustment.	Lenses are scratched or broken. Mounting brackets are broken or have missing nieces.
6	Before	Tank Exterior: Monitor Video, Power Cables (Figure 3-4 and 3-4a)	Check cables and connectors for general condition and adjustment. Tighten any loose cable connections.	Any cable or connector is broken or frayed. Any connector is broken or will not fit properly.

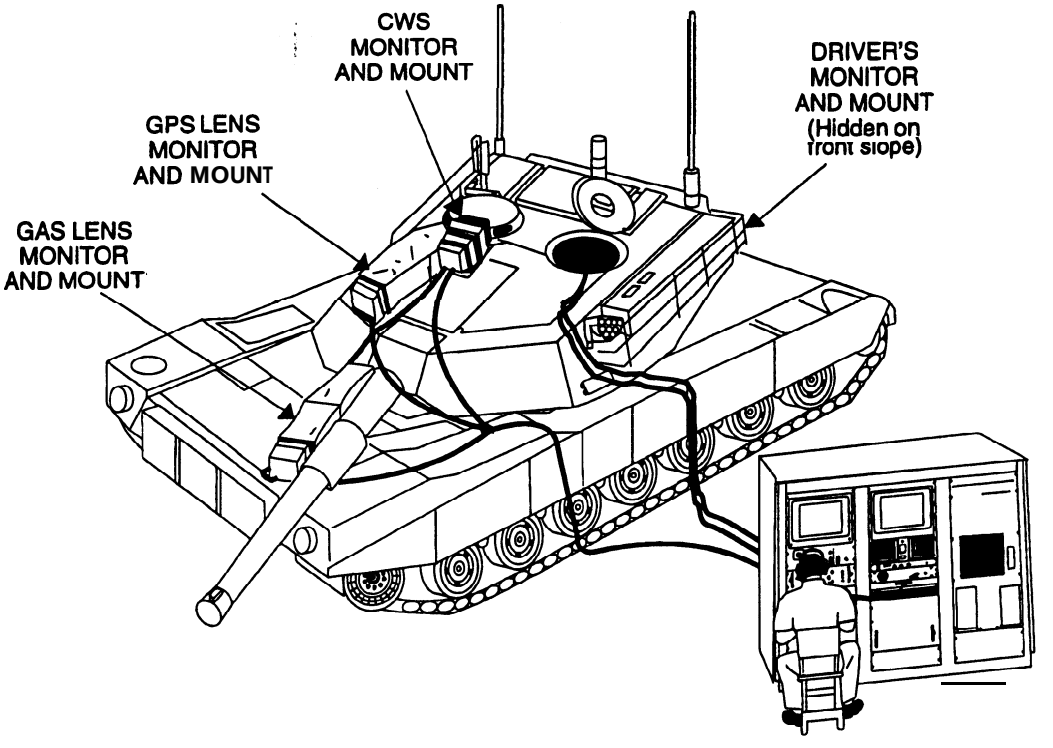

Figure 3-4. Tank Exterior, Optical Assemblies (TD 17/162A)

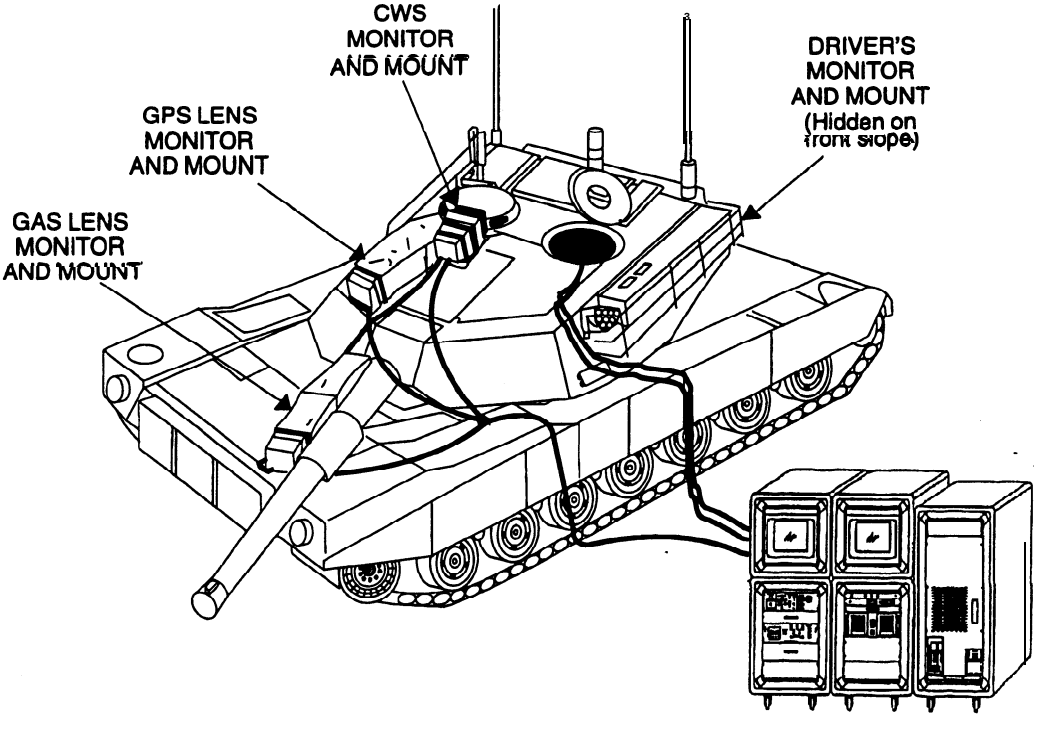

Figure 3-4a. Tank Exterior, Optical Assemblies (TD 17/162B)

Table 3-1. Preventive Maintenance Checks and Services (PMCS) (Continued)

Item No.	Interval	Location/ Item to Check or Service	Procedure	Not Fully Mission Capable If:
7	During	Tank Interior - Driver's Station: Mechanical Sensors, Facades, and Sensor Connections (Figure 3-5)	Check sensors and facades for presence.	Any component is missing.
			Check sensors and facades for general conditions.	Any component is broken.
			Check sensors and facades for security of mounting.	Sensor or facade will not mount securely.
			Check cables and connectors for general condition and adjustment.	Any cable or connector is broken or frayed.
				Any connector is broken or will not fit properly.
			Tighten any loose fittings or cable connections.	

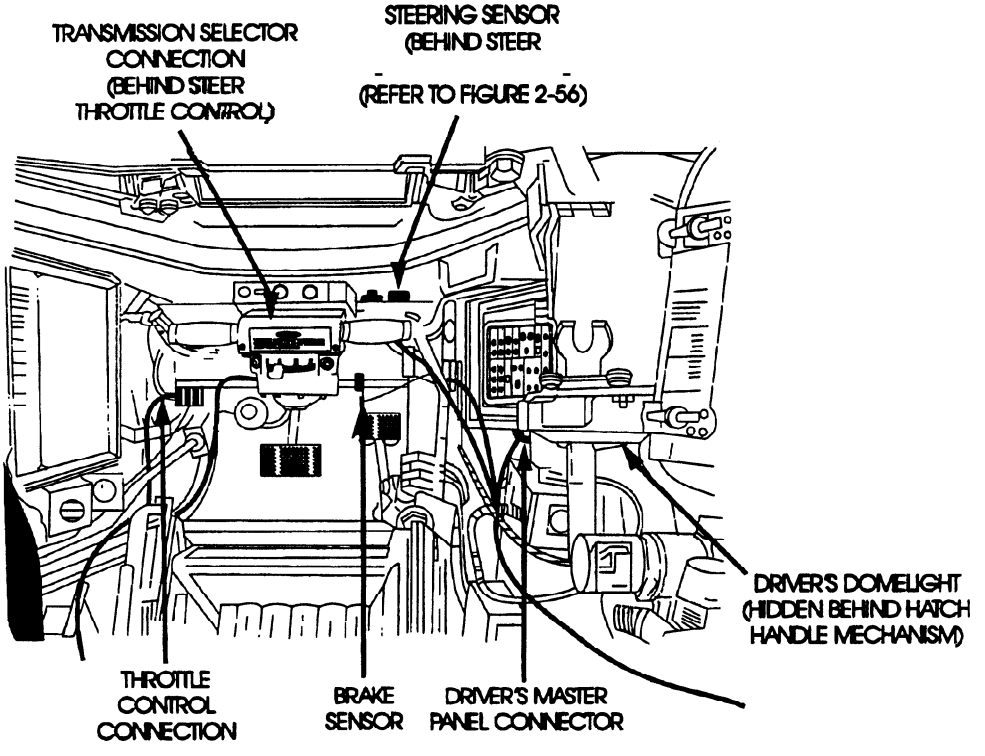

Figure 3-5. Driver's Station

Table 3-1. Preventive Maintenance Checks and Services (PMCS) (Continued)

Item No.	Interval	Location/ Item to Check or Service	Procedure	Not Fully Mission Capable If:
8	During	Tank Interior -Turret, TC's Station: Mechanical Sensors, Facades, and Sensor Connectors (Figure 3-6)	Monitor mechanical sensors and facades to ensure they remain securely mounted and functioning properly.	Mechanical sensors or facades are broken and can not be securely mounted, adjusted, or tightened.
			Check IOS real-time display at IOS for proper sensor function. Perform Daily Readiness Check and calibration as necessary.	Sensor out of tolerance and cannot be calibrated.
			Check cables and connectors for general condition and adjustment.	Any cable or connector is broken or frayed.
				Any connector is broken or will not fit properly.
			Tighten any loose sensors, fittings, or cable connections.	

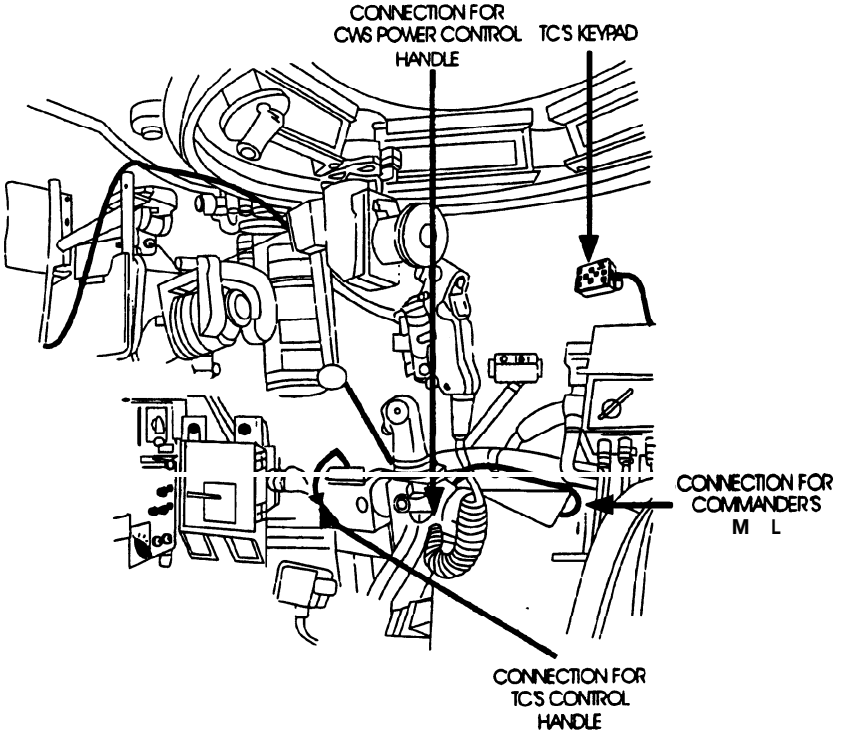

Figure 3-6. TC's Station

Table 3-1. Preventive Maintenance Checks and Services (PMCS) (Continued)

Item No.	Interval	Location/ Item to Check or Service	Procedure	Not Fully Mission Capable If:
9	During	Tank Interior -Turret, Gunner's Station: Mechanical Sensors, Facades, and Sensor Connectors (Figure 3-7)	Monitor mechanical sensors and facades to ensure they remain securely mounted and functioning properly.	Mechanical sensors or facades are broken and can not be securely mounted, adjusted, or tightened.
			Check IOS real-time display at IOS for proper sensor function. Perform Daily Readiness Check and calibration as necessary.	Sensor out of tolerance and cannot be calibrated.
			Check cables and connectors for general condition and adjustment.	Any cable or connector is broken or frayed. Any connector is broken or will not fit properly.
			Tighten any loose sensors, fittings, or cable connections.	

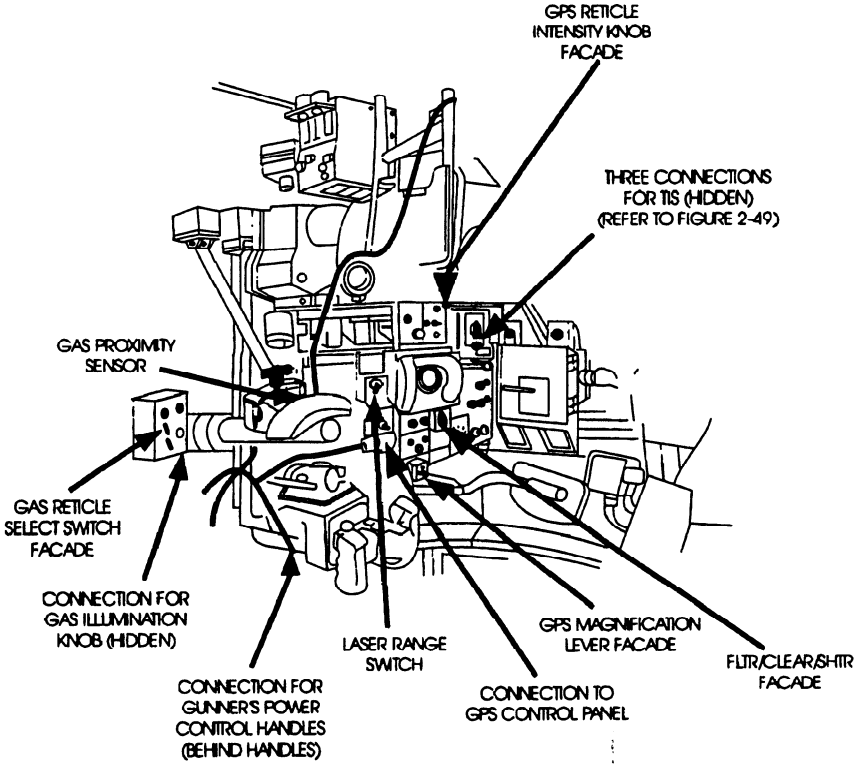

Figure 3-7. Gunner's Station

Table 3-1. Preventive Maintenance Checks and Services (PMCS) (Continued)

Item No.	Interval	Location/ Item to Check or Service	Procedure	Not Fully Mission Capable If:
10	During	Tank Interior -Turret, Loader's Station (Ammo Storage): Mechanical Sensors, Facades, and Sensor Connectors (Figure 3-8)	Monitor mechanical sensors and facades to ensure they remain securely mounted and functioning properly.	Mechanical sensors or facades are broken and can not be securely mounted, adjusted, or tightened.
			Check IOS real-time display at IOS for proper sensor function. Perform Daily Readiness Checks and calibration as necessary.	Sensor out of tolerance and cannot be calibrated.
			Check cables and connectors for general condition and adjustment.	Any cable or connector is broken or frayed.
				Any connector is broken or will not fit properly.
			Tighten any loose sensors, fittings, or cable connections.	

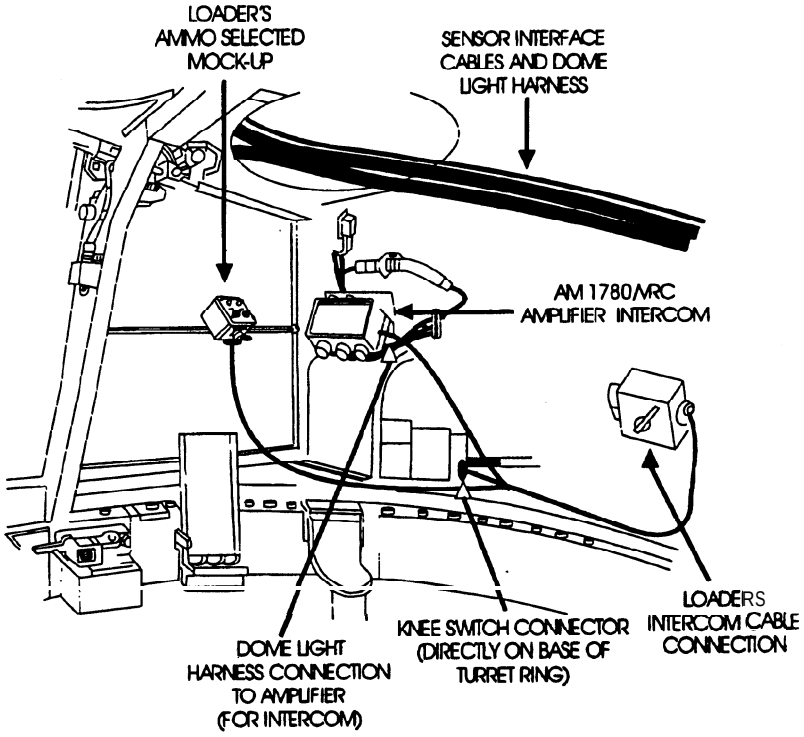

Figure 3-8. Loader's Station (Ammo Storage)

Table 3-1. Preventive Maintenance Checks and Services (PMCS) (Continued)

Item No.	Interval	Location/ Item to Check or Service	Procedure	Not Fully Mission Capable If:
11	During	Tank Interior -Turret, Loader's Station: Mechanical Sensors, Facades, and Sensor Connectors (Figures 3-9 and 3-10)	Monitor mechanical sensors and facades to ensure they remain securely mounted and functioning properly.	Mechanical sensors or facades are broken and can not be securely mounted, adjusted, or tightened.
			Check IOS real-time display at IOS for proper sensor function. Perform Daily Readiness Checks as necessary.	Sensor nonoperational.
			Check cables and connectors for general condition and adjustment.	Any cable or connector is broken or frayed.
				Any connector is broken or will not fit properly.
			Tighten any loose sensors, fittings, or cable connections.	

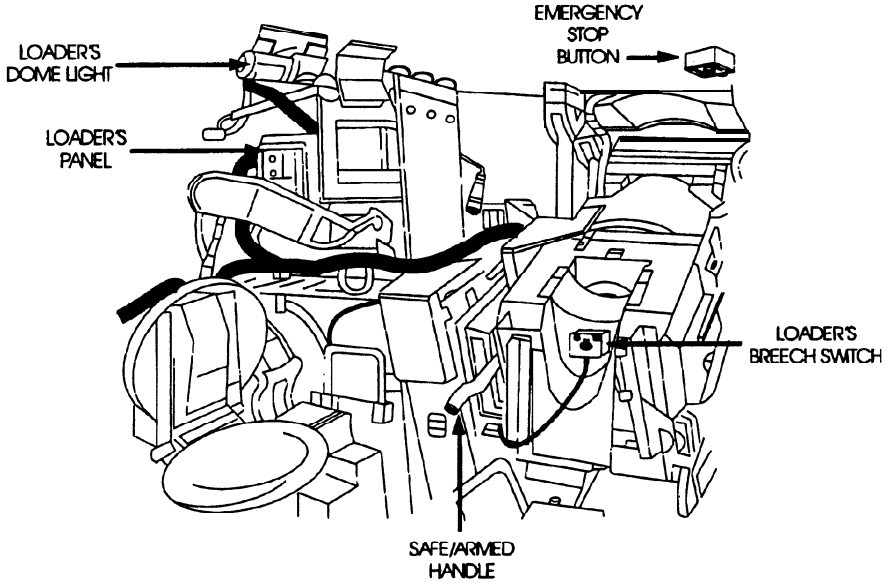

Figure 3-9. Loader's Station (M1A1 Main., Gun)

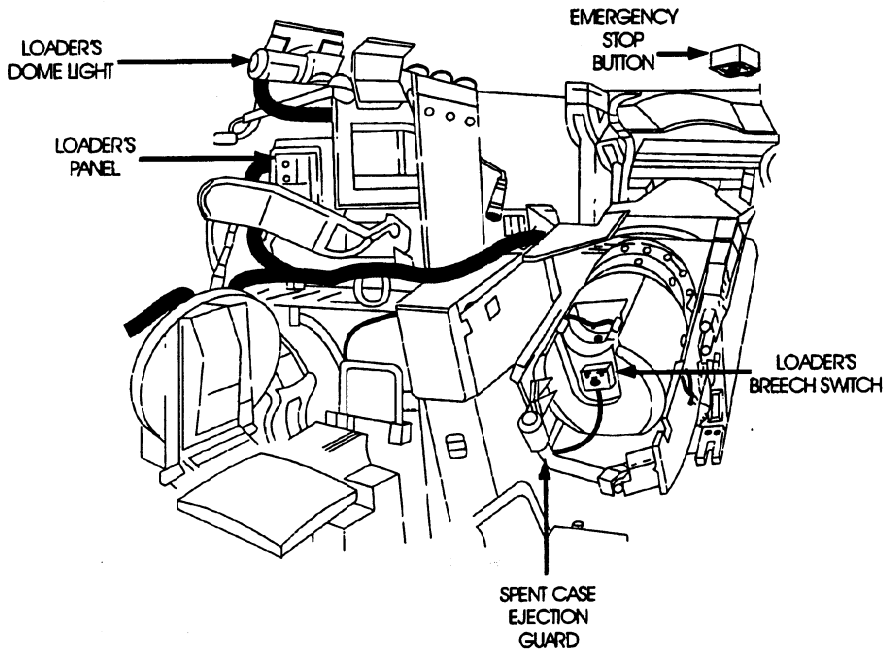

Figure 3-10. Loader's Station (M1 Main Gun)

Table 3-l. Preventive Maintenance Checks and Services (PMCS) (Continued)

Item No.	Interval	Location/ Item to Check or Service	Procedure	Not Fully Mission Capable If:
12	After	IOS (Figure 3-11and 3-11a)	Check components and controls for presence, condition, cleanliness.	Any component is missing.
			Check glass on monitors.	Any monitor screen is cracked or broken.
			Check for presence and condition of cables and connectors on IG front.	Any cable insulation is cracked, cut or frayed.
			Inspect connections to ensure that all are complete and properly connected on IG front.	Any connector is broken or will not connect properly.
			Tighten any loose connections.	

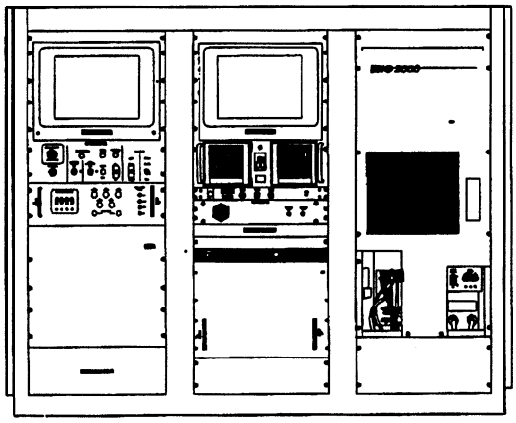

Figure 3-11. IOS (TD 17/162A)

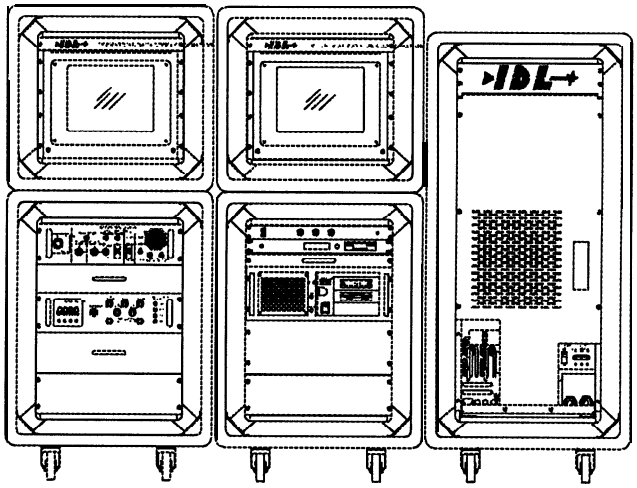

Figure 3-11a. IOS (TD 17/162B)

Table 3-1. Preventive Maintenance Checks and Services (PMCS) (Continued)

Item No.	Interval	Location/ Item to Check or Service	Procedure	Not Fully Mission Capable If:
13	After	Tank Exterior: Cables (from IOS to Tank) (Figure 3-12 and 3-12a)	Check for general condition, cuts, frays, breaks in insulation, loose connectors. Tighten any loose connectors.	Any cable is frayed, cut or broken; any connector is broken.

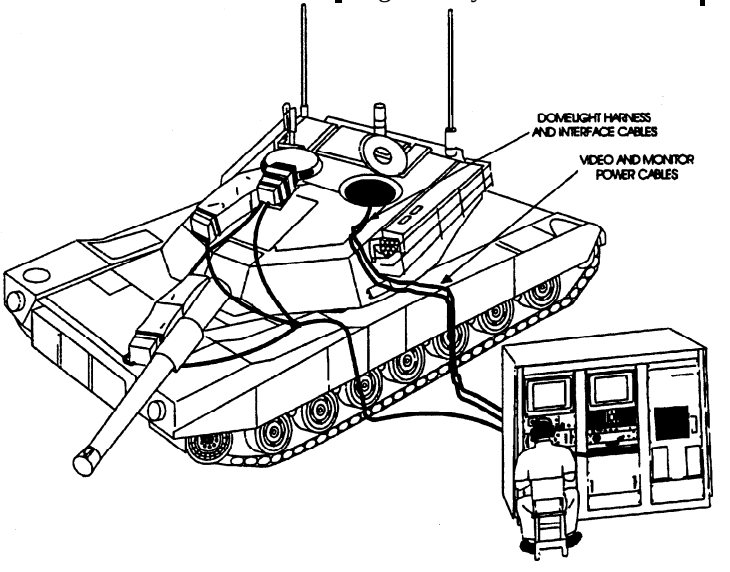

Figure 3-12. Tank Exterior, Cables (TD 17/162A)

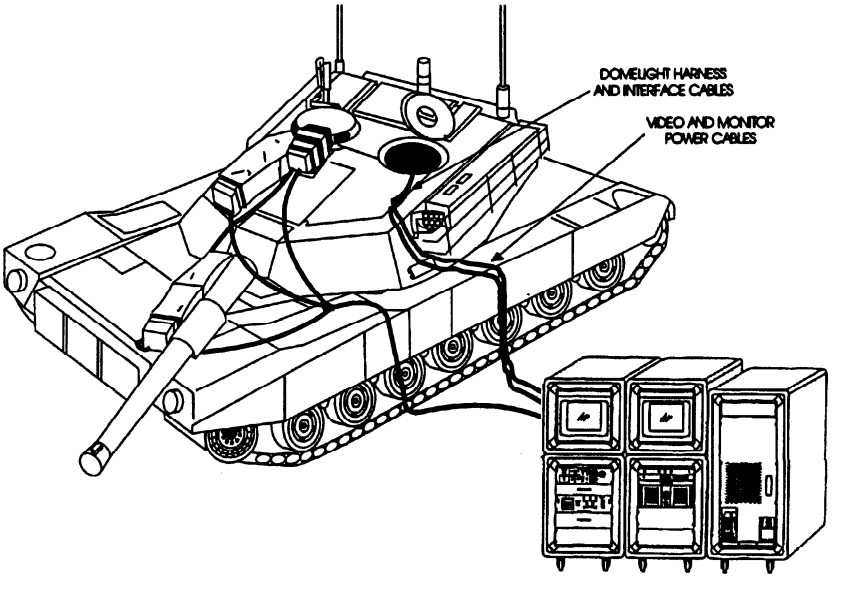

Figure 3-12a. Tank Exterior, Cables (TD 17/162B)

Table 3-1. Preventive Maintenance Checks and Services (PMCS) (Continued)

Item No.	Interval	Location/ Item to Check or Service	Procedure	Not Fully Mission Capable If:
14	After	Tank Exterior: Monitors (Figure 3-13 and 3-13a)	Check monitors for general condition.	Monitor is cracked or broken.
15	After	Tank Exterior: Monitor Mounts (Figure 3-13 and 3-13a)	Check monitor mounts for general condition and adjustment. Tighten any loose fittings or adjusting points.	CWS monitor mount mirrors are scratched or broken. Mounts do not adjust properly. Mounts are broken or have missing pieces.
16	After	Tank Exterior: Collimator Lens Assemblies (Figure 3-13 and 3-13a)	Check lens assemblies for general condition and adjustment.	Lenses are scratched or broken. Mounting brackets are broken or have missing pieces.
17	After	Tank Exterior: Monitor Video, Power Cables (Figure 3-13 and 3-13a)	Check cables and connectors for general condition and adjustment. Tighten any loose cable connections.	Any cable or connector is broken or frayed. Any connector is broken or will not fit properly.

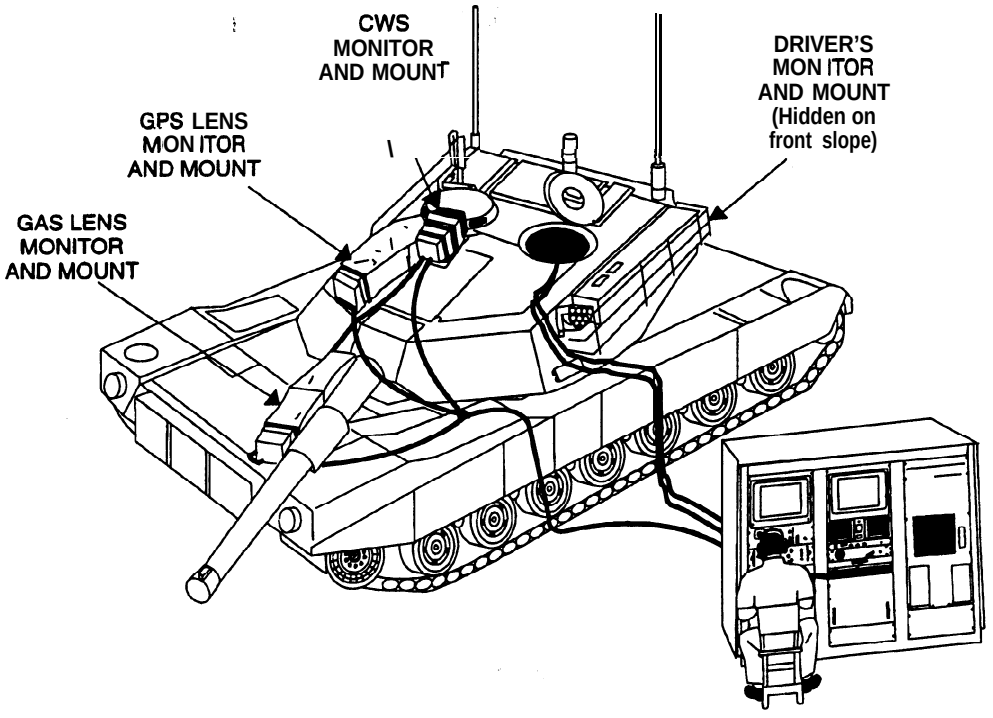

Figure 3-13. Tank Exterior, Optical Assemblies (TD 17/162A)

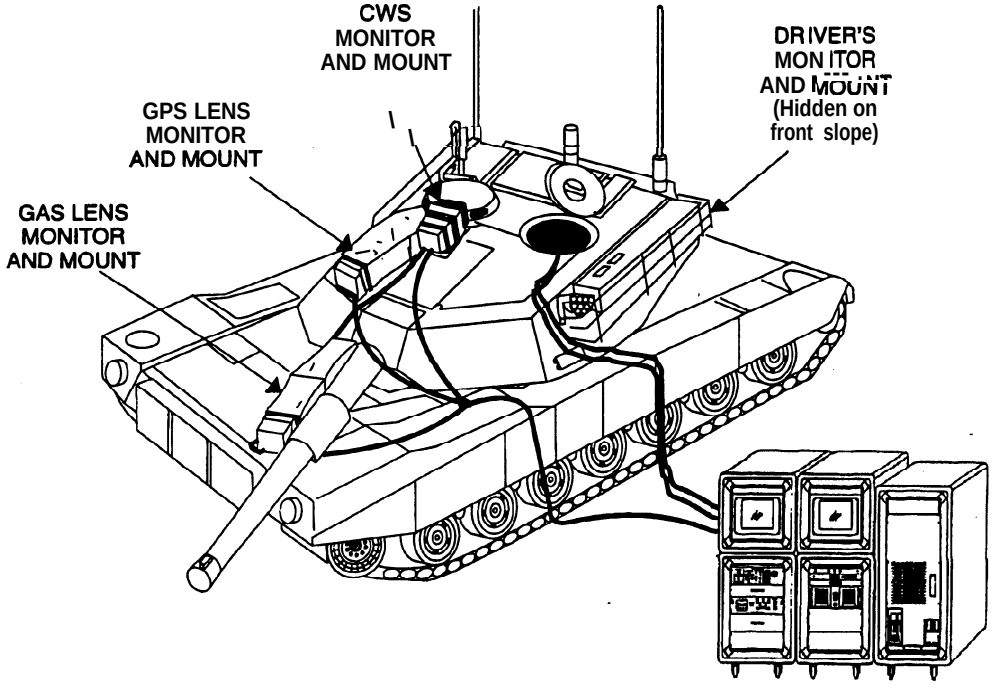

Figure 3-13a. Tank Exterior, Optical Assemblies (TD 17/162B)

Table 3-1. Preventive Maintenance Checks and Services (PMCS) (Continued)

Item No.	Interval	Location/ Item to Check or Service	Procedure	Not Fully Mission Capable If:
18	After	Tank Interior - Driver's Station: Mechanical Sensors, Facades, and Sensor Connections (Figure 3-14)	Check sensors and facades for presence.	Any component is missing.
			Check sensors and facades for general conditions.	Any component is broken.
			Check sensors and facades for security of mounting.	
			Check cables and connectors for general condition and adjustment.	Any cable or connector is broken or frayed.
				Any connector is broken or will not fit properly.
			Tighten any loose fittings or cable connections.	

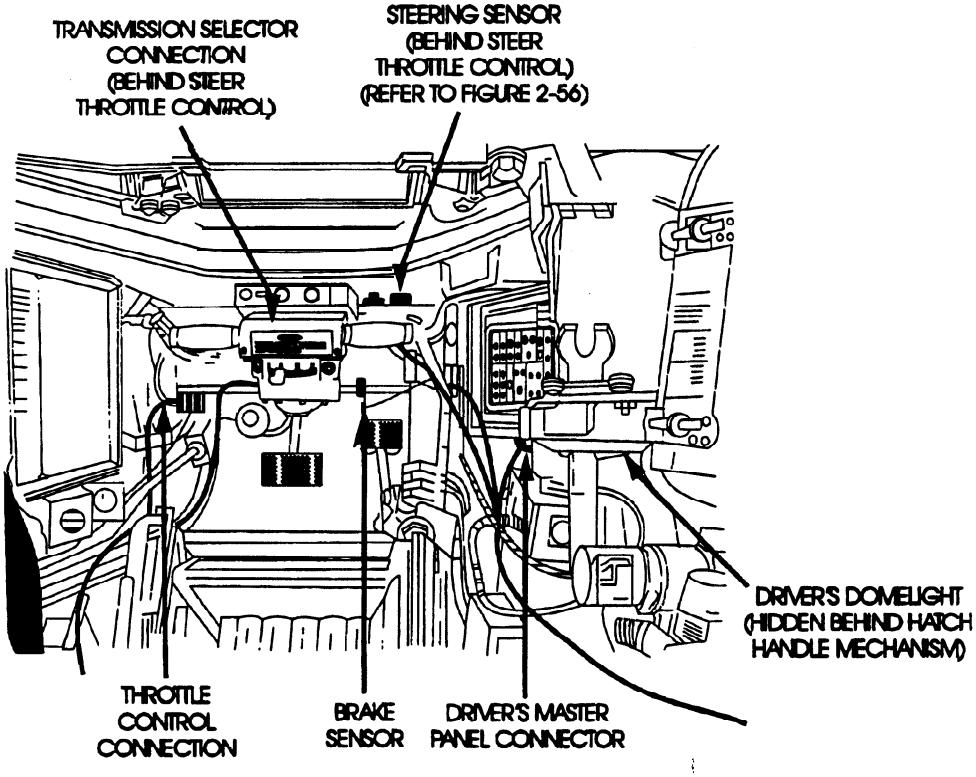

Figure 3-14. Driver's Station

Table 3-1. Preventive Maintenance Checks and Services (PMCS) (Continued)

Item No.	Interval	Location/ Item to Check or Service	Procedure	Not Fully Mission Capable If:
19	After	Tank Interior -Turret, TC's Station: Mechanical Sensors, Facades, and Sensor Connectors (Figure 3-15)	Check mechanical sensors and facades to ensure they are securely mounted and functioning properly.	Mechanical sensors or facades are broken and can not be securely mounted, adjusted, or tightened.
			Check IOS real-time display at IOS for proper sensor function.	Sensor out of tolerance.
			Check cables and connectors for general condition and adjustment.	Any cable or connector is broken or frayed.
				Any connector is broken or will not fit properly.
			Tighten any loose sensors, fittings, or cable connections.	

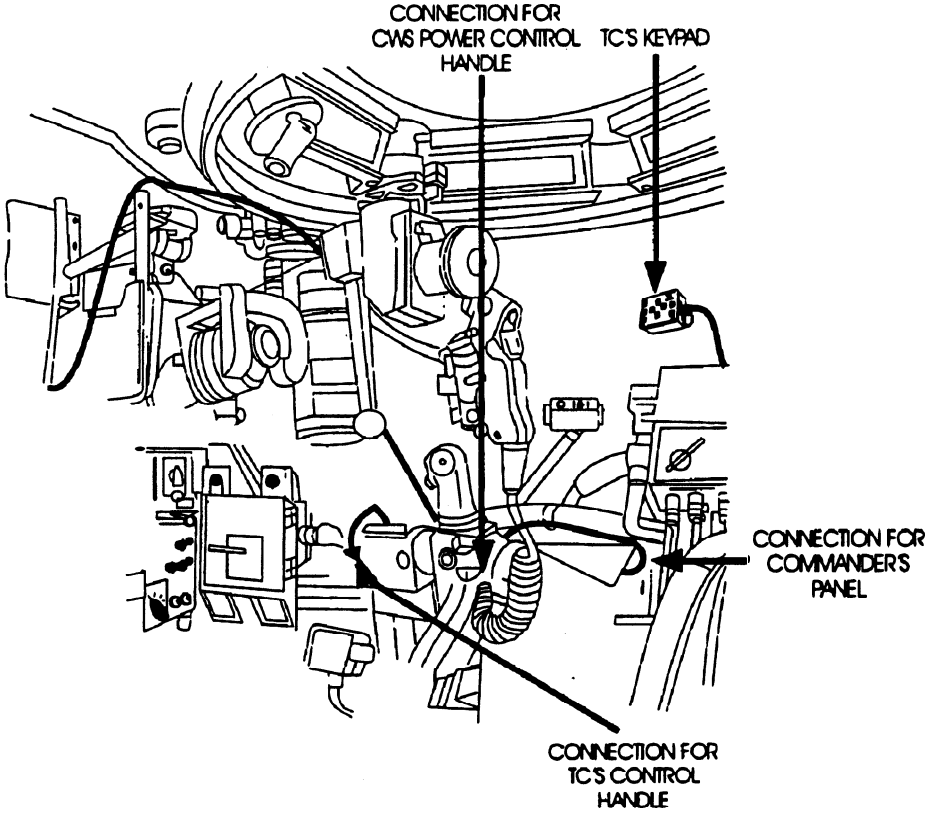

Figure 3-15. TC's Station

Table 3-1. Preventive Maintenance Checks and Services (PMCS) (Continued)

Item No.	Interval	Location/ Item to Check or Service	Procedure	Not Fully Mission Capable If:
20	After	Tank Interior -Turret, Gunner's Station: Mechanical Sensors, Facades, and Sensor Connectors (Figure 3-16)	Check mechanical sensors and facades to ensure they are securely mounted and functioning properly.	Mechanical sensors or facades are broken and can not be securely mounted, adjusted, or tightened.
			Check IOS real-time display at IOS for proper sensor function.	Sensor out of tolerance.
			Check cables and connectors for general condition and adjustment.	Any cable or connector is broken or frayed.
				Any connector is broken or will not fit properly.
			Tighten any loose sensors, fittings, or cable connections.	

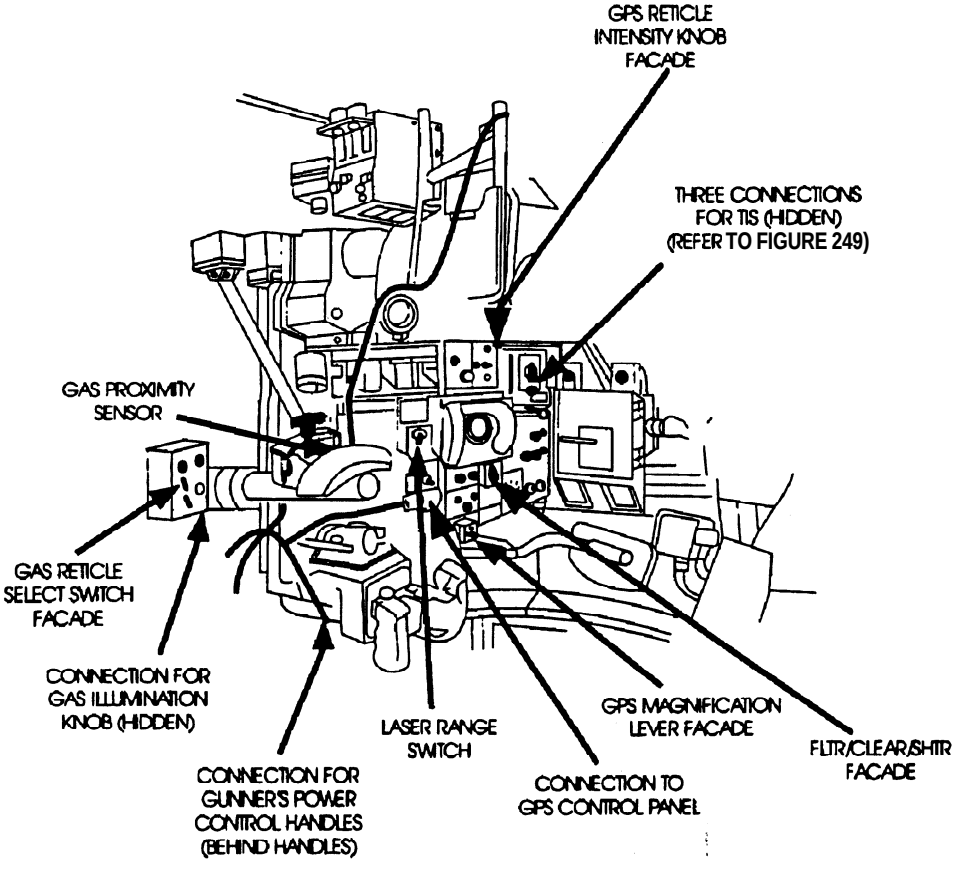

Figure 3-16. Gunner's Station

Table 3-1. Preventive Maintenance Checks and Services (PMCS) (Continued)

Item No.	Interval	Location/ Item to Check or Service	Procedure	Not Fully Mission Capable If:
21	After	Tank Interior -Turret, Loader's Station (Ammo Storage): Mechanical Sensors, Facades, and Sensor Connectors (Figure 3-17)	Check mechanical sensors and facades to ensure they are securely mounted and functioning properly.	Mechanical sensors or facades are broken and can not be securely mounted, adjusted, or tightened.
			Check IOS real-time display at IOS for proper sensor function.	Sensor out of tolerance.
			Check cables and connectors for general condition and adjustment.	Any cable or connector is broken or frayed.
				Any connector is broken or will not fit properly.
			Tighten any loose sensors, fittings, or cable connections.	

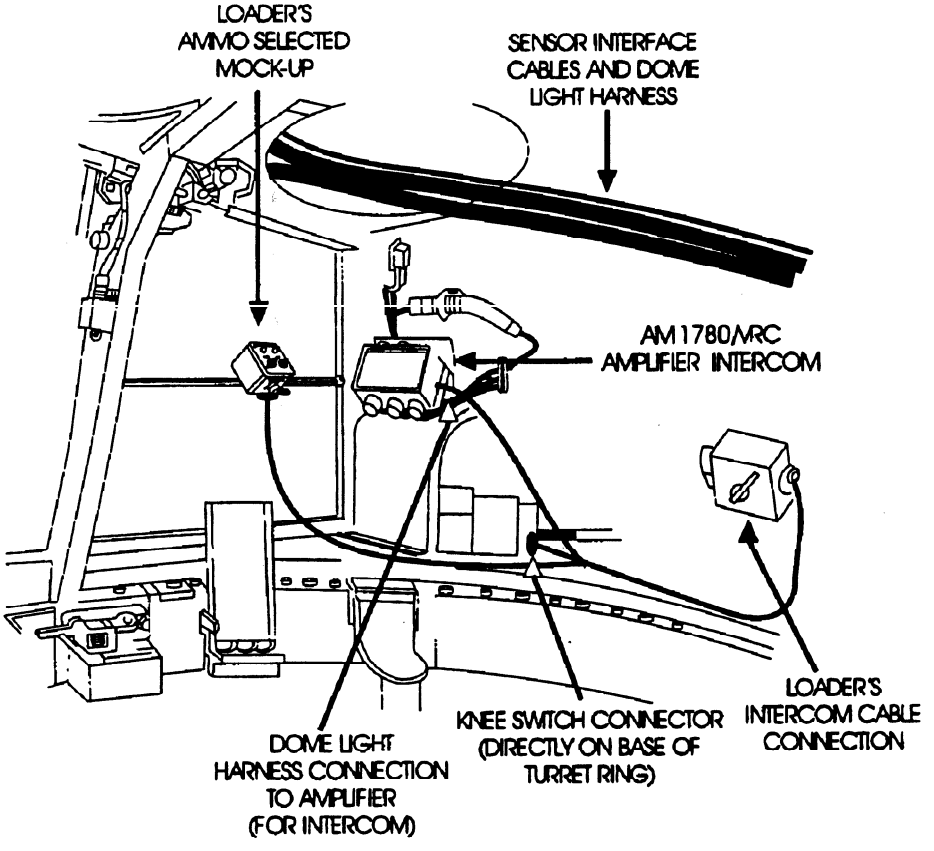

Figure 3-17. Loader's Station (Ammo Storage)

Table 3-1. Preventive Maintenance Checks and Services (PMCS) (Continued)

Item No.	Interval	Location/ Item to Check or Service	Procedure	Not Fully Mission Capable If:
22	After	Tank Interior -Turret, Loader's Station: Mechanical Sensors, Facades, and Sensor Connectors (Figures 3-18 and 3-19)	Check mechanical sensors and facades to ensure they are securely mounted and functioning properly.	Mechanical sensors or facades are broken and can not be securely mounted, adjusted, or tightened.
			Check IOS real-time display at IOS for proper sensor function.	Sensor out of tolerance.
			Check cables and connectors for general condition and adjustment.	Any cable or connector is broken or frayed. Any connector is broken or will not fit properly.
			Tighten any loose sensors, fittings, or cable connections.	

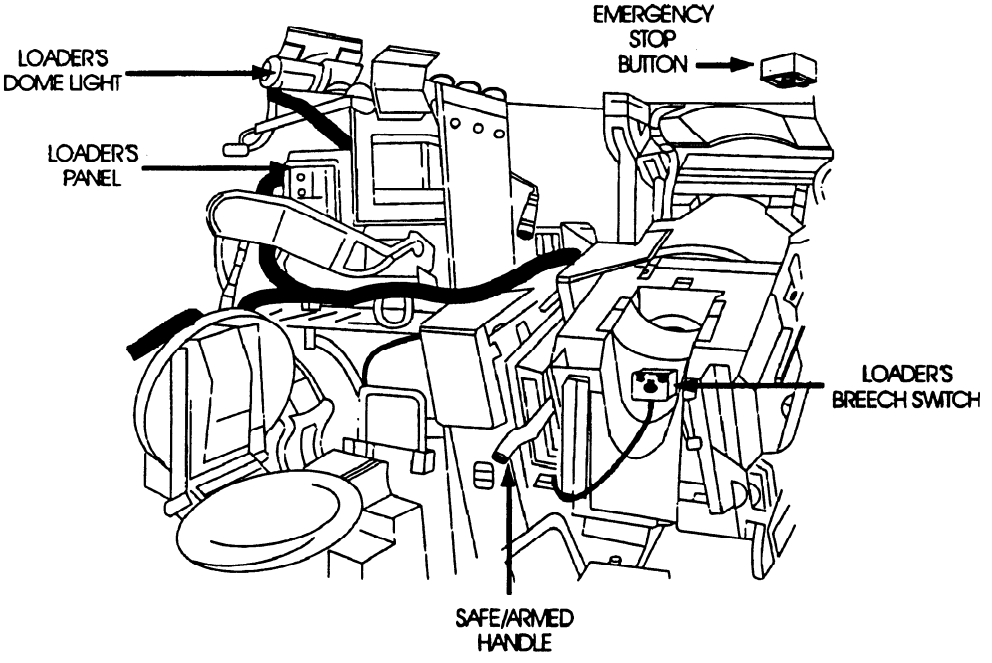

Figure 3-18. Loader's Station (M1A1 Main Gun)

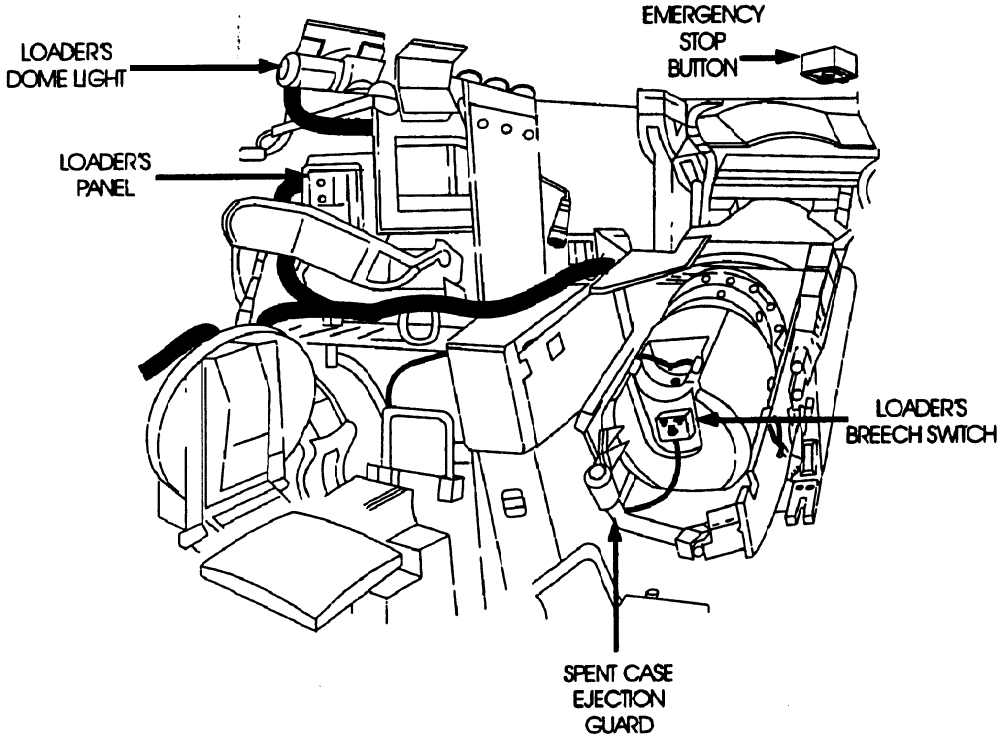

Figure 3-19. Loader's Station (M1 Main Gun)

SECTION II. SCOPE

3.4 GENERAL.

Operator's maintenance on the Abrams Full-crew Interactive Simulator Trainer (AFIST), in addition to the Preventive Maintenance Checks and Services (PMCS) listed in Section I, consists of cleaning the system's surfaces and keeping the components free from dust and dirt. Table 3-2 outlines regular operator maintenance actions.

Table 3-2. Preventive Maintenance

Trainer System	Maintenance Task	Frequency of Maintenance			
		D	M	A	AN
Instructor/Operator Station	Dust Surfaces	X			
	Clean Monitor Screens	X			
	Check Fans/Clean Filters	x	x		X
	Change Printer Ribbon				X
	Add Printer Paper				X
Tank-Appended Components	Clean Monitors		X		X
	Clean GPS and GAS Collimator Lenses		X		X

D = Daily A = Annually
M = Monthly AN = As Needed

3.5 DAILY MAINTENANCE PROCEDURES.

Perform the following procedures every day before the trainer is used:

a. Using a soft, dry cloth or soft-bristled brush, dust off all the horizontal surfaces of the Instructor/Operator Station (IOS), particularly the writing surface and the top surface of the printer.

b. Using a soft, dry cloth, dust off both IOS monitor screens and both monitor covers. If necessary, spray a small amount of mild glass cleaner or video screen cleaner on the cloth first. Do not spray any liquids directly on the monitor screens or covers.

c. Clean plastic monitor covers on IOS.

d. Check that all five fans on the Image Generator (IG) are operating by placing a hand above each fan, one at a time, to verify air flow.

3.6 WEEKLY MAINTENANCE.

There are no weekly operator maintenance procedures.

3.7 MONTHLY MAINTENANCE.

The following procedure should be followed once a month. If the AFIST system remains mounted on the tank for at least a month, clean the collimator lens assemblies and monitors by performing the following:

a. Remove the light shrouds covering the collimator lens assemblies at the Gunner's Auxiliary Sight (GAS) and Gunner's Primary Sight (GPS).

b. Remove the collimator lenses and clean with lens paper or a soft, lint-free cloth. A small amount of lens cleaner may be used on the cloth, but not sprayed on the lenses.

c. While the light shroud is off, check that all connectors and mounts are clean; adjust or replace as necessary.

d. Reinstall the collimator lenses and light shrouds.

e. Tilt the monitors back to access the screens. If necessary, spray a small amount of mild glass cleaner or video screen cleaner on the cloth first. Do not spray any liquids directly on the monitor screens.

f. Lube drawer racks.

NOTE

Recalibration will be necessary after this procedure. Check that video appears properly in the field of view for the GAS and GPS.

3.8 ANNUAL MAINTENANCE.

The system controller and IG fan filters must be cleaned as follows:

a. System controller fan filters. (See Figure 3-20.)

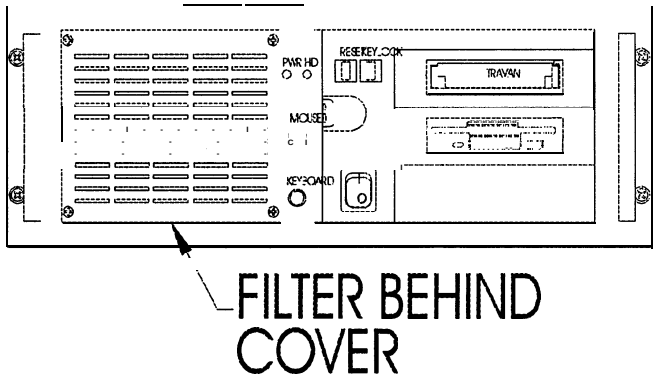

Figure 3-20. System Controller Fan Filter Covers

(1) Remove the four screws holding the slotted Filter panel to the System Controller.

(2) Remove the four nuts on back of the panel holding the filter bracket.

(3) Remove the filter.

(4) Wash the filter with warm water and let dry.

(5) Replace the filter, bracket and filter panel.

b. IG fan filters (refer to Figure 3-21 and 3-21a)

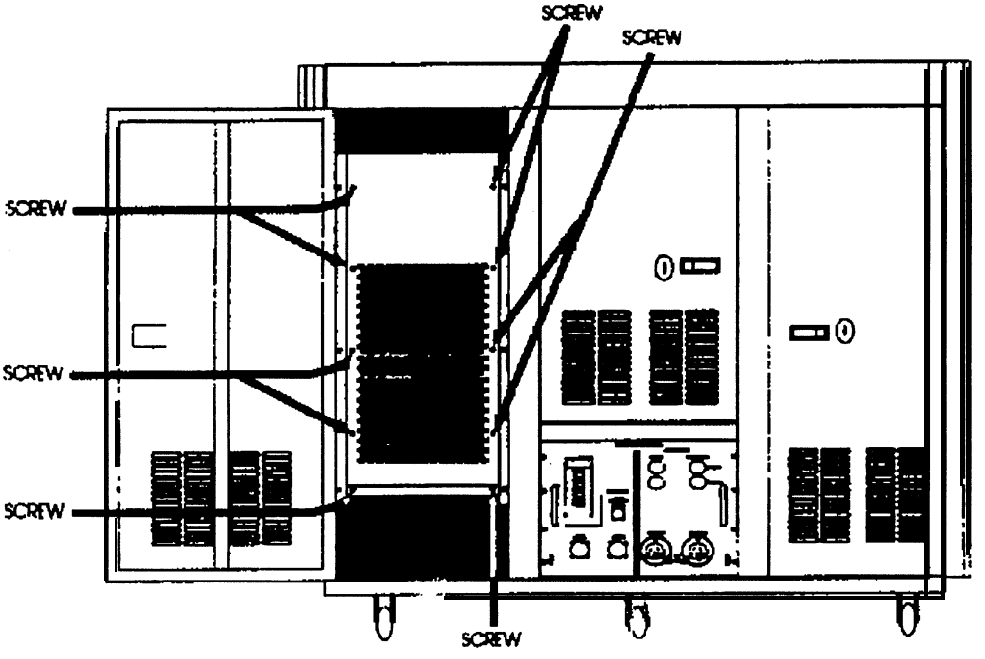

Figure 3-21. IG Fan Filter Cover (TD 17/162A)

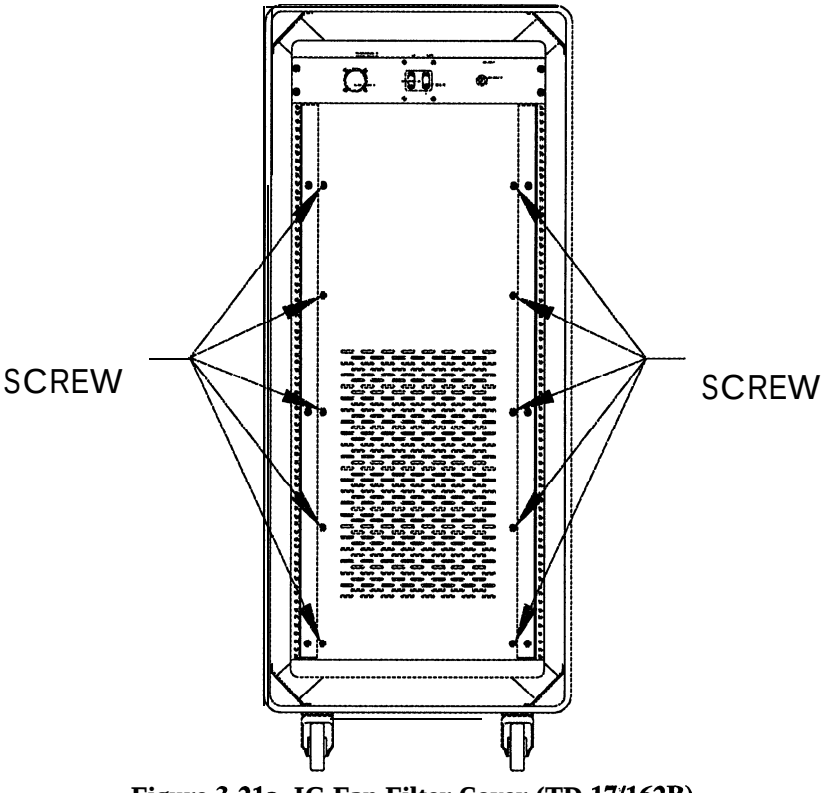

Figure 3-21a. IG Fan Filter Cover (TD 17/162B)

(1) With the power off, remove the ten screws holding the back cover on the IG.

(2) Use compressed air to blow the dirt from the filter by directing the air stream in the opposite direction of normal air flow.

(3) Replace the filters, cover, and screws.

3.9 AS NEEDED MAINTENANCE.

The following procedures should be performed as indicated, or whenever necessary.

a. Check the supply of printer paper before each training session to ensure that there is enough for the session. Add paper as necessary. Do this as follows:

NOTE

Using the paper feed knob to adjust paper position can cause misaligned paper. Use the printer control panel to make position adjustments.

(1) Press the ON LINE key to turn the printer offline. (See Figure 3-22.)

(2) Remove the paper guide.

(3) Move the paper select lever to the forward position.

(4) Unlock the lock levers on the tractor feeders and adjust them to the approximate paper width.

(5) Open the tractor feeder covers and place the paper on the sprocket pins. Close the covers to clamp the paper.

(6) Adjust the tractor feeders until the paper is just taut between them, and lock the levers.

(7) Reinstall the paper guide. Make sure the guide lies flat.

(8) Move the paper holders from the sides into the middle of the paper guide.

(9) Press the PARK/LOAD key to advance the paper to the starting printing position.

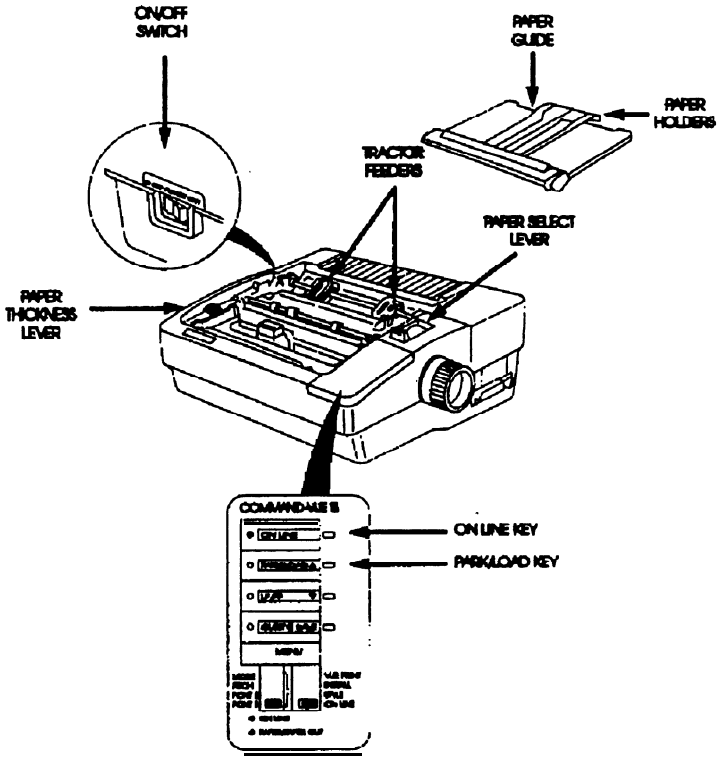

Figure 3-22. Printer

b. If necessary, change the printer ribbon as follows:

CAUTION

Turn printer power off and make sure printhead is cool before attempting to change the printer ribbon.

(1) Turn the printer offline.

(2) Open the top cover and slide the printhead to the center of the platen.

(3) Remove the new cassette from the packaging and position it with the ribbon knob aligned over the post protruding from the left end of the floor of the printer opening.

(4) Lower the ribbon cassette into place and snap it down.

(5) Slide the ribbon down into position between the printhead and the metal ribbon mask. Do not force the ribbon between the ribbon mask and the ribbon guide. See printer operators manual.

(6) Turn the ribbon knob clockwise, advancing the ribbon until it is taut.

(7) Move the printhead to ensure the printhead moves smoothly without snagging the ribbon.

c. If necessary, clean the collimator lens assemblies and monitors in accordance with the monthly maintenance procedures in 3.4.

d. If necessary, change the I/O Control Panel fuses, shown in Figure 3-23 and 3-23a, as follows:

CAUTION

Turn system off.

(1) Twist and pull the cap over the blown fuse to remove it.

(2) Gently remove the blown fuse from the fuse cap.

(3) Twist and pull the cap over the appropriate spare fuse.

(4) Gently insert a spare fuse into the first fuse cap and replace the cap.

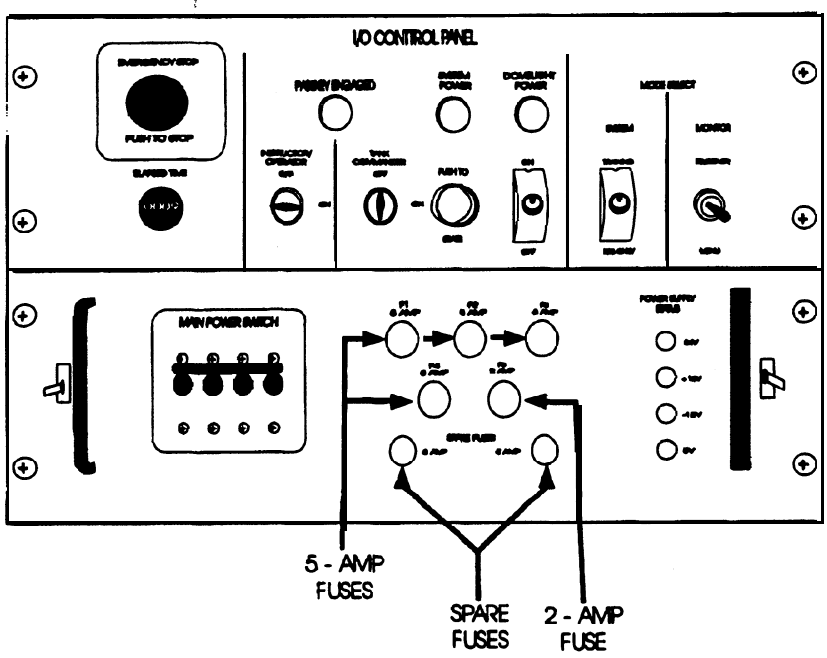

Figure 3-23. I/O Control Panel (TD 17/162A) Fuses

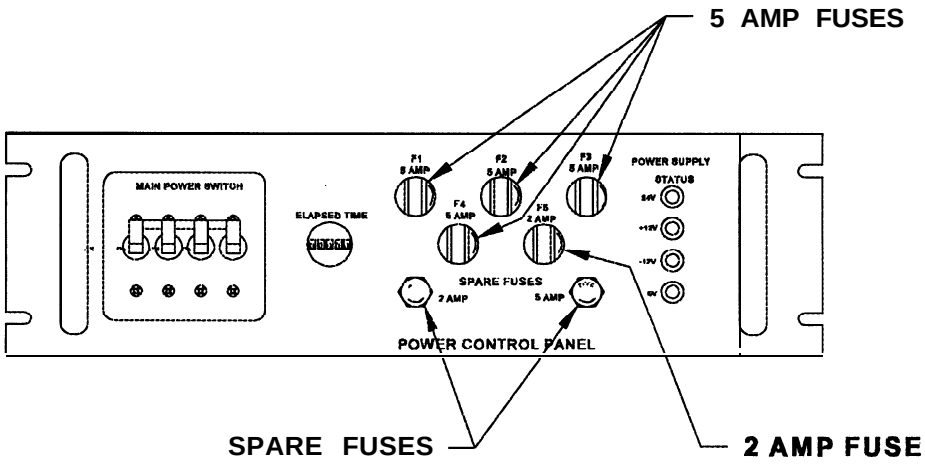

Figure 3-23a. I/O Control Panel (TD 17/162B) Fuses

SECTION III. TROUBLESHOOTING PROCEDURES

3.10 MALFUNCTION INDEX

The Malfunction Index (Table 3-3) is a quick-reference for locating troubleshooting procedures in this chapter. It contains the same information found in the on-screen Fault Isolation Diagnostics (FID). Use the index to refer you to a page in the troubleshooting guide

Table 3-3. Malfunction Index

Problem Component	Troubleshooting Guide Item No.
COMPONENTS EXTERNAL TO TANK	
Instructor/Operator Station (IOS)	
The Host Computer (System Controller)	1
Standard Alphanumeric Glidepoint Keyboard	2
Video Monitors	3
Dot Matrix Printer	4
I/O Headphone/Microphone	5
Image Generator (IG)	
Image Generator Computer System	6
TANK APPENDED COMPONENTS	
Optical Assemblies	
Commander's Weapon Station (CWS) Optical Assembly and Monitor	7
Gunner's Primary Sight (GPS) Optical Assembly and Monitor	8
Gunner's Auxiliary Sight (GAS) Optical Assembly and Monitor	9
Driver's Monitor	10
Sensors	
Tank Commander's Station	
Commander's Crew Station	11
Remote Keypad Assembly	12
Gunner's Station (on GPS Control Panel)	
Gunner's Crew Station	13
GPS FLTR/CLEAR/SHTR Facade	14
GAS Reticle Select Switch Facade	15

Table 3-3. Malfunction Index

Problem Component	Troubleshooting Guide Item No.
GAS Proximity Sensor	16
Loader's Station	
Loader's Crew Station	17
Speaker/Amplifier Assembly	18
Driver's Station	
Driver's Crew Station	19
Brake/S teering Sensor Assembly	20
Miscellaneous	
Dome light Cable	21
Fuses	22
Turret/IOS Emergency Power Off Switch	23
Catastrophic failure	24

NOTE

If the Troubleshooting Guide solution is "Call Maintenance Contractor," record the following information before calling:

- Nature of the problem
- Conditions under which the problem occurred
- Steps taken to diagnose or correct the problem
- Name, location, and phone number of the Senior I/O

If possible, place the telephone at the AFIST IOS, then contact the Maintenance Contractor at **(800) 787-9560.**

3.11 TROUBLESHOOTING GUIDE.

Table 3-4. Troubleshooting Guide (Continued)

ITEM NO.	PROBLEM	CHECK	SOLUTION
1	Error message is displayed on IOS monitor.	a. Record Error Message.	Refer to System Maintenance Manual.
	Computer fails to operate.	a. Are environmental conditions outside specified ranges?	Operating temperature range is 40 to 90 degrees Fahrenheit (4.4 to 32.2 degrees Celsius) with a humidity range of 30 to 90 percent relative humidity (non-condensing). If the environmental conditions are outside of these ranges, steps must be taken to correct the out of range condition before conducting training.
		b. Are air filters obstructed?	Perform preventive maintenance on air filters to prevent air flow obstruction. Refer to Systems Maintenance Manual.
		c. Are voltage levels within specification?	The power source will be no more than two separate 20 ampere circuit breakers. One circuit breaker for the IOS will provide single phase 3 wire AC power 110+/- 10% Vac, 60 Hz +/- 2 Hz. Another circuit breaker for the image generator will be a single phase power source with safety ground and provide an average voltage of not less than 208 Vac and not greater than 250 Vac, 47 to 63 Hz. Fluctuation from average voltage shall not be greater than +/- 10%.
	AFIST software will not execute.	a. Is hard disk error message present?	Record error message. Call maintenance contractor.
		b. Is operator unable to execute training exercises?	Call Maintenance Contractor.

Table 3-4. Troubleshooting Guide (Continued)

ITEM NO.	PROBLEM	CHECK	SOLUTION
2	Computer Glidepoint Keyboard do not work properly.	a. Are PS\2 connectors marked with a KEYBOARD and MOUSE picture connected to the front of the computer properly ?	Connect keyboard and mouse cords to connectors marked Keyboard and Mouse at the front of the computer.
		b. Is dirt or moisture present on keys or touchpad?	Remove dirt or moisture with low pressure compressed air. Dampen towel with alcohol and clean the touchpad. Allow to dry before attempting to retest.
			Refer to System Maintenance Manual.
3	Poor video quality.	a. Are the brightness and contrast controls adjusted correctly?	Adjust the video brightness and contrast controls. Refer to the Operator's Manual for instructions.
		b. Are the horizontal and vertical edges of the picture off the screen?	Open the monitor front panel access door and adjust the horizontal and vertical alignment of the picture. Refer to the Operator's Manual for instructions.
		c. Is the video cable from the IOS to monitor damaged? Are there bent or broken pins?	Replace damaged cables. Call maintenance contractor.
		d. Are there sharp bends in the video cables? Is there sufficient slack in the video cabling?	Route cables with sufficient slack. Avoid sharp bends or routing near power lines. Refer to System Maintenance Manual.